



# ALEXANDER FLEMING



Born: 6<sup>th</sup> August 1881

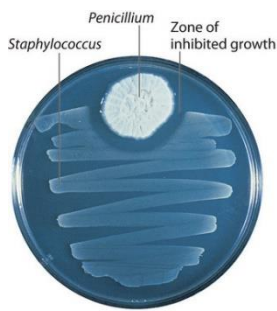
Died: 11<sup>th</sup> March 1955

Alexander Fleming was a Scottish microbiologist best known for his discovery of Penicillin.

## MAIN ACHIEVEMENT

The discovery of penicillin was a major medical breakthrough. Penicillin was the **first effective antibiotic** that could be used to kill bacteria. This meant that cures for serious illnesses were possible even if the patient had the disease.

Penicillin had been discovered during the 19<sup>th</sup> century, but it was Alexander Fleming who first realised its great importance in 1928. During World War I, he noticed that antiseptics seemed unable to prevent infection, particularly in deep wounds. He decided to try to find something that could kill the bacteria which caused infections like septicaemia.



On 3<sup>rd</sup> September 1928, Fleming returned to his laboratory having spent August on holiday with his family. Before leaving for his holiday, he had stacked all his cultures of staphylococci (bacteria) on a bench in a corner of his laboratory. On returning, Fleming noticed that one culture was contaminated with a fungus, and that the colonies of staphylococci immediately surrounding the fungus had been destroyed, whereas other staphylococci colonies farther away were normal.

Fleming grew the mould in a pure culture and found that it produced a substance that killed a number of disease-causing bacteria. He identified the mould as being from the genus *Penicillium*, and, after some months of calling it "mould juice", named the substance it released *penicillin* on 7<sup>th</sup> March 1929. The laboratory in which Fleming discovered and tested penicillin is preserved as the Alexander Fleming Laboratory Museum in St. Mary's Hospital, Paddington.

## EARLY LIFE

Born on 6<sup>th</sup> August 1881 at Lochfield farm, in Ayrshire, Scotland, Alexander was the third of four children of farmer Hugh Fleming.

Fleming went to Loudoun Moor School and Darvel School, and earned a two-year scholarship to Kilmarnock Academy before moving to London, where he attended the Royal Polytechnic Institution. In 1903, Alexander enrolled at St Mary's Hospital Medical School in Paddington; he qualified with an MBBS degree from the school with distinction in 1906.

## ADULT LIFE

Fleming joined the research department at St Mary's, where he became assistant bacteriologist. In 1908, he gained a BSc degree with Gold Medal in Bacteriology, and became a lecturer at St Mary's until 1914.

Fleming served throughout World War I in the Royal Army Medical Corps, he and many of his colleagues worked in battlefield hospitals at the Western Front in France. In 1918, he returned to St Mary's Hospital, where he was elected Professor of Bacteriology of the University of London in 1928.



## AWARDS

Fleming was knighted for his scientific achievements in 1944. In 1999, he was named in *Time* magazine's list of the 100 Most Important People of the 20th century. In 2002, he was chosen in the BBC's television poll for determining the 100 Greatest Britons, and in 2009, he was also voted third "greatest Scot" in an opinion poll conducted by STV, behind only Robert Burns and William Wallace.

## FIND OUT MORE...

<https://kids.britannica.com/kids/article/Alexander-Fleming/476259>

<https://www.bbc.co.uk/bitesize/clips/zd2qxb>

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## EXAMPLE QUESTIONS:

1. What did Fleming discover?
2. Why was World War I important to the use of penicillin?
3. Which country was Fleming born in?
4. What does penicillin do?
5. In which year was Fleming knighted?